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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,483	12/15/2003	Alexander C. Pummer	0317-01	3492

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EXAMINER

LEE, JOHN J

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/736,483	Applicant(s) PUMMER ET AL.	
	Examiner JOHN J. LEE	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6,7,10-19,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 11 is/are allowed.
- 6) ☒ Claim(s) 1,2,6,7,12-19,21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments with respect to claims 1, 2, 6, 7, and 12 - 19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 1, 2, 6, 7, and 12 - 19** are rejected under **35 U.S.C. 112, first paragraph**, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Re claims 1 and 12, the newly added limitation “there is an absence of signal-processing components disposed between the LOS antenna and the shadow antenna” **was not described in the specification** in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

More specifically, the amended limitation “an absence of signal processing components” has not been identified or recognized by the disclosure in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano et al. (US patent number 4,849,963) in view of Izadpanah (US 2003/0050099).

Regarding **claim 21**. Kawano discloses that a telecommunications system (Fig. 1) for use a radio-frequency (RF) shadow of a communication station (12 in Fig 1) (Fig. 1 and column 3, lines 62 – column 4, lines 65). Kawano teaches that a line-of-sight (LOS) antenna (20 in Fig. 2) (Fig. 1 and column 4, lines 33 – 65, where teaches an antenna (line-of-sight antenna) receives a transmit signal from the cell site base station). Kawano teaches that a shadow antenna (21 in Fig. 2) in communication with the LOS antenna (Fig. 2 and column 4, lines 33 – column 5, lines 17, where teaches the antenna (line-of-sight) connects to communicate with shadow antenna). Kawano teaches that duplexers disposed between the LOS antenna and the shadow antenna (Fig. 2 and column 6, lines 35 – column 7, lines 25). Kawano teaches that a plurality of amplification sections disposed between the duplexer and the shadow antenna, respectively (Fig. 2 and column 6, lines 35 – column 7, lines 25, where teaches a plurality of amplification sections (55, 57, 61 in Fig. 3) disposed between duplexer and the shadow antenna).

Kawano does not specifically disclose the limitation “a splitter disposed between the receiving antenna and the transmitting antennas and a plurality of amplification

sections disposed between the splitter and the transmitting antennas”. Izadpanah discloses the limitation “a splitter disposed between the receiving antenna and the transmitting antennas and a plurality of amplification sections disposed between the splitter and the transmitting antennas” (Fig. 3 and pages 4, paragraphs 45 – 47, where teaches a three way splitter disposed between the receiving antenna and transmitting antennas and a plurality of amplification sections disposed the splitter and transmitting antennas). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Kawano system as taught by Izadpanah, provide the motivation to achieve conserving power and improving reception quality in wireless communication system.

Regarding **claim 22**. Kawano and Izadpanah disclose all the limitation, as discussed in claim 21. Furthermore, Kawano further discloses that providing a signal received by an antenna in line of sight of a communication station to a antenna in line of sight of an RF shadow of the communication station (Fig. 2, 3, column 3, lines 62 – column 4, lines 65, and column 2, lines 58 – column 3, lines 37, where teaches in the shadow of mobile device transmits the cellular signal (RF) to shadow antenna, and the shadow antenna transmits the received signal to the antenna (line-of sight) for transmitting the received signal to the call site base station and the call site base station transmits the transmitting signal to the antenna (line-of sight), and the antenna (line-of sight) transmits the received signal to the shadow antenna for transmitting the received signal to the mobile device). Kawano teaches that amplifying the signal provided to the shadow antenna, respectively (Fig. 2, 3 and column 6, lines 35 – column 7, lines 25,

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where teaches a plurality of amplification sections (55, 57, 61 in Fig. 3) amplifying the signal and providing the signal to the shadow antenna).

Allowable Subject Matter

6. Claims 10 and 11 are allowed.

Claims 10 and 11 are allowable over the prior art of record because a search does not detect the combined claimed elements as set forth in the claims 10 and 11.

As recited in independent claim 11, the prior teaches a telecommunication system for providing service to a cellular device located within a radio frequency shadow of communication station an antenna for receiving a transmitter signal and a shadow antennas communicates with the antenna.

None of the prior art of record teaches or fairly suggests that a splitter disposed between the LOS antenna and each of the plurality of shadow antennas and for splitting the transmitter signal into a corresponding plurality of transmitter signal communicated to the shadow antenna, and a plurality of amplification sections respectively disposed between the shadow antenna and the splitter each for amplifying a respectively received transmitter signal and for amplifying the cellular signal received by a respective one of the shadow antennas, and together with combination of other element as set forth in the claims 10 and 11. Therefore, claims 10 and 11 are allowable over the prior art of records.

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7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dupuy (US Patent number 5,659,879) discloses Method of Covering Shadow Areas in a Cellular Mobile Radio System and Radio Booster for Implementing This Method.

Drabeck et al. (US Patent number 6,549,529) discloses Controlling Antenna Downtilt/Uptilt in a Wireless Communication Network.

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Information regarding...Patent Application Information Retrieval (PAIR) system...
at 866-217-9197 (toll-free)."

Any response to this action should be mailed to:

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or faxed (703) 308-9051, (for formal communications intended for entry)

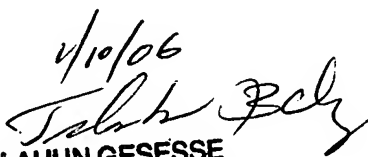
Or: (703) 308-6606 (for informal or draft communications, please label
"PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to USPTO Headquarters,
Alexandria, VA.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**.
He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00
pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Nay
Aung Maung**, can be reached on **(571) 272-7882**. Any inquiry of a general nature or
relating to the status of this application should be directed to the Group receptionist
whose telephone number is (703) 305-4700.

J.L.
January 7, 2006

John J Lee

4/10/06

TILAHUN GESESSE
PRIMARY EXAMINER